

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755330002-5

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CIA-RDP86-00513R001755330002-5"

TERENT'EV, N. I.

8
6
2

✓ Sulfonation and sulfonic acids of acidophobic compounds.
XXV. The use of dioxane sulfotrioxide for determination
of mono and polyhydroxy compounds. A. P. Terent'ev and
N. B. Kuznetsov, *Ukrain. Khim. Zh.*, 1968, 44, 1928. *Chem. Abstr.* 63, 151-4 (1968); *J. C.A.* 47, 12238. A
determ. with 2-3% accuracy of HO groups is possible by re-
action of ROH with 1 mole $(\text{C}_6\text{H}_5\text{CH}_2)_3\text{O}_3\text{SO}_3$ in 2-3 min.
After addn. of H_2O the resulting H_2SO_4 is titrated conven-
tionally. The reagent is prepd. by passing an air stream
through 60% oleum, then into dioxane; 1.5-2M soln. is
used. Satisfactory results were obtained with EtOH, Bu-
OH, 2-methyl-3-propanol, 2-methyl-4-propanol, 1-nonanol,
allyl alc., 1,1,1-trichloro-2-propanol, benzyl alc., phenyl-
propyl alc., 2-octanol, cyclohexanol, 2-methyl-2-butanol,
menthol, 2-methyl-1-pentanol, 2-methyl-2-hexanol, 1,3-
and 1,4-butanediols, 1,4-butanediol, pinacol, pentaerythri-
tol, mannitol, and $\text{CH}_2\text{CH}_2\text{OCH}_2\text{C}(\text{OH})\text{Am}$. The polyat-
alcs. generally require 1-2 hrs. for complete soln. which in-
dicates the end of the reaction. G. M. Roughloff

2 M.A. 40072
2 copies

11/1/68

~~T~~ERENT'YEV A. P.

USSR/Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19172

Author : Grinyev A. N., ~~T~~erent'yev A. B., Terent'yev A. P.

Inst :

Title : Studies in the Series of Quinones. VII. Synthesis of some Quinones of Dihydro- and Tetrahydronaphthalene by the Oxidation of Corresponding Hydroquinones with Potassium Bromate.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 2.

Abstract: Synthesis of 5,8-dihydronaphthoquinone-1,4 (I), 2-methyl-1,4-dihydronaphthoquinone-1,4 (II), 5,6,7,8-tetrahydronaphthoquinone-1,4 (III) and 5,8-benzodithienyl-5,8-dihydronaphthoquinone-1,4 (IV) by oxidation of the corresponding hydroquinones by means of KBrO_3 is described. Hydroquinone is dissolved by heating in dioxane, a solution of KBrO_3 in hot water and 1N. H_2SO_4 are added, the mixture is heated to 60° , the

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Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19172

precipitate is dried in the dark. Below are enumerated the amounts of the starting hydroquinone and KBrO_3 in Gramms, amount of water, dioxane and 1N. H_2SO_4 in cc, the obtained substance and its yield is g.: 4.2, 20, 40, 2. I, 0.5, 5, 10, 1, II, 0.9; 1, 0.5, 5, 9, 0.7, III, 0.9; 1, 0.5, 6, 10, 0.8, IV, 0.87. Part VI see RZhKhim, 1956, 32427.

Card : 2/2

17 E R - N T ' y e v , A . P .

USSR/Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19173

Author : Grinyev A. N., Pan Don Khvar, Frosin V. N., ~~T~~erent'yev
A. P.

Inst :

Title : Studies in Quinones. VIII. Condensation of Chlor-and 2,
3-dichloro-n-benzoquinone with Acetoacetic and Benzoyl-
acetic Esters.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 2, 561-564

Abstract: There were obtained diethyl esters of 4-chloro-2,6-dime-
thylbenzo-[1, 2-c; 4,5-c']-difuranedicarboxylic-3, 7
acid (I); ethyl ester of 6,7-dichloro-2-methyl-5-hydro-
xybenzofuranecarboxylic-3 acid (III) by condensation of
chloro-(IV) and 2,3-dichloro-n-benzoquinone (V) with
 $\text{CH}_3\text{COCH}_2\text{COOC}_2\text{H}_5$ (VI) and $\text{C}_6\text{H}_5\text{COCH}_2\text{COOC}_2\text{H}_5$ (VII) in alco-
hol, in the presence of ZnCl_2 . To the solution of 28 g.

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Abs Jour: Ref Zhur-khimiya, No 6, 1957, 19173

ZnCl₂ in 20 g. of abs. alcohol is added 39 g. VI, and at 80-90° is added in small portions 15 g. IV, heated for 30 min. (80°); after cooling 8.2 g. I, m. p. 164-165° (from alcohol) is obtained. Structure I is determined by its transformation at the chlorination into diethyl ester 4,8-dichloro-2,6-dimethylbenzo-1,2-c; 4,5-c'-7-difuranedicarboxylic -3,7 acid. By saponification of I with alcoholic alkali the corresponding acid is obtained, m. p. 240° (decomp. from CH₃COOH). In analogical conditions from 5 g. V, 18 g. VI, 3,8 g. ZnCl₂ and 5 cc abs. alcohol is obtained 2.9 g. II, m.p. 202.5° (from alc.). Structure II is determined by its transformation into the ethyl ester of 4,6,7-trichloro-2-methyl-5-hydroxybenzofuranecarboxylic-3 acid. Saponification of II yields the corresponding acid, m.p. 275° (dec., from a 50% CH₃COOH).

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Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19173

From 6 g. V, 7 g. VII, 4.75 g. ZnCl_2 and 6 cc abs. alcohol is obtained 5.35 g. III, m.p. 185-186° (from alc.)
At the saponification of III the corresponding acid m.p. 207° (dec.) is obtained.

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TERENT'YEV A P

TERENT'YEV, A.P.

E-2

USSR/Organic Chemistry. Synthetic Organic Chemistry.

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19174

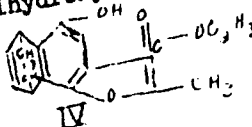
Author : Grinyev A.N., Terentyev A.B., Terent'yev A.P.

Inst :

Title : Study in Quinones. IX. On the interaction of 5,8-endoethylene-1, 4-naphthoquinone with Hydrogenchloride and Acetoacetic ester.

Orig Pub: Zh. obshch. khimiyi, ¹⁹⁵⁶~~1955~~, 26, No 3, 730-732.

Abstract: By the condensation of 5,8-endoethylene-1, 4-naphthoquinone (I) with HCl in ether according to the method described (RZhKhim, 1955, 42972) is obtained 2-chloro-5,8-endoethylene-1,4-dihydroxynaphthalene (II), m.p. 155°C (from glac. CH₃COOH).



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Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19174

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II is also obtained by the diene synthesis from chloroquinone and cyclohexadiene with the subsequent isomerization of the adduct (yield of the adduct 87%, m.p. 78-79°C) by heating in CH₃COOH + HCl. The interaction of I with acetoacetic ester (III) in the presence of ZnCl₂ leads to the substituted benzofuran (IV), m.p. 192-193°C (from CH₃COOH and benzene). From IV at the hydrolysis with 50% NaOH the corresponding hydroxy acid (V), m.p. 233°C (from 50% alcohol) is obtained. By Methylation of V with (CH₃)₂SO₄ a methoxy acid m.p. 272°C (dec. sublimation) is obtained. Condensation I with III, hydrolysis IV and methylation V is carried out according to the method described (RZhKhim. 1955, 48930).

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A-F.

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26784.

Author : Terent'yev, A.P.; Potapov, V.M.

Inst :

Title : Sulfonation and Sulfo Acids of Acidophobe Compounds. XXVII. Alkylsulfuric Acids as Reagents for Splitting Racemic Bases.

Orig Pub: Zh. obshch. khimii, 1956, 26, No. 4, 1225 - 1228.

Abstract: A new type of acid asymmetric reagents - acid sulfates of optically active alcohols - is proposed for splitting amines into optic antipodes. The salts with (-)-bornylsulfate (I) and (-)-menthylsulfate (II) are used for splitting α -penylethylamine (III), α -(m-xylyl)-ethylamine (IV) and α -(n-xylyl)-ethylamine (V).

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USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26784.

20.6 g of SO_3 in 70 ml of dichloroethane was added to the solution of 23 ml of dioxane in 130 ml of dichloroethane at 0° , after which 40 g of (-)-borneol was added to it. After the neutralization of the aqueous layer with BaCO_3 79% of Ba-salt of I, dissociation point $103 - 104^\circ$, $[\alpha]_{\text{D}}^{20} - 18.00^\circ$ (c = 2.7; water), was produced by concentration by evaporation. Ba-salt of II, dissociation point $111 - 112^\circ$, $[\alpha]_{\text{D}}^{18} - 55.10^\circ$ (with 1.5; water), was produced of (-)-menthol in a similar way. 2.7 g of the salt I.(+)-III, melting point 163° , $[\alpha]_{\text{D}}^{18} - 12.40^\circ$ (with 1.1; water), $[\alpha]_{\text{D}}^{18} - 14.20^\circ$ (c = 1.9; CH_3OH), was produced of 5.1 g of III sulfate and 9.3 g of Ba salt of I (separation of BaSO_4 , concentration of filtrate by evaporation down to 200 ml,

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USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26784.

recrystallization of the residue); the salt I.(-)-III, melting point 145° , $[\alpha]_{18D} - 18.9^{\circ}$ ($c = 1.3$; water), $[\alpha]_{18D} - 20.8^{\circ}$ (with 3.0; CH_3OH), was produced of the filtrate after the separation of the salt by concentration by evaporation. 34 g of III was added to the solution of I (of 44 g of borneol) in $ClCH_2CH_2Cl$, and 44.9 g of the salt I.(+)-III, melting point 163° (from water), $[\alpha]_{20D} - 17.3^{\circ}$ ($c = 8$; CH_3OH), was separated after standing; the decomposition of the salt by an excess of $Ba(OH)_2$ with distillation with steam results in (+)-III, boiling point $184 - 186^{\circ}$, $[\alpha]_{20D} 40.6^{\circ}$ (without solvent); I was regenerated as a Ba salt. (-)-III, optical purity 63%, was received from the filtrate in a similar

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TERENT'YEV, A.P.

USSR/Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19175

Author : Grinyev A. M., Shvedov B. I., ~~Terent'yev A.P.~~

Inst :

Title : Studies in the Field of Quinones. Reaction of Acetyl-acetoneimine with n-benzoquinone. XI. Synthesis of some substituted Indoles.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 5, 1449-1451; 1452-1453 X.

Abstract: At the interaction of n-benzoquinone (I) with the imine of acetylacetone (II) 2-methyl-3-acetyl-5-hydroxybenzofurane (III) and 2-methyl-3-acetyl-5-hydroxyindole (IV) are formed. Structure of IV is determined by the identity of 2-methyl-3-acetyl-5-methoxyindole (V) obtained from it with the V obtained by the counter synthesis. To a solution of 3 g. I in 8 cc of dry acetone is added a solu-

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Abs Jour: Ref Zhur-khimiya, No 6, 1957, 19175

tion of 2.8g. II in 8cc acetone, heated for 1 hour at 100° and IV yield 38.1%, m.p. 292-293° (from pyridine), and III, yield 28.9%, m.p. 234-235° (from dioxane) are isolated. To a sol. 1.1 g. IV in 15cc 2N solution NaOH are added 1.5 cc dimethylsulfate (VI), heated at 100° for 30 min. (in a current of N₂) and V is obtained, yield quantitative, m.p. 127-128° (from dioxane). To a solution of 5.5 g. 2-methyl-3-carbethoxy-5-hydroxyindole (VII) in 36 cc 2N solution NaOH is added by shaking 6.6g. VI (in a current N₂) then 15 cc 2N solution NaOH, heated for 30 min. at 100°, and 2-methyl-3-carbethoxy-5-methoxyindole (VIII), yield amount, m.p. 160.5-161° from alcohol) is obtained. A suspension of 10 g. VIII in 350 cc 2N solution NaOH and 150 cc dioxane are boiled 2 hours dioxane is distilled off, and 2-methyl-5-methoxyindole (IX) is obtained, m.p. 89-90°. By acidifying the mother solution with CH₃COOH,

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USSR/Organic Chemistry. Synthetic Organic Chemistry.

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Abs Jour: Ref Zhur-khimiya, No 6, 1957, 19175

acid (XII) is studied. It was determined, that at the interaction of N-phenylacetylacetoneimine (XIII) with I, 1-phenyl-2-methyl-3-carbethoxy-5-hydroxyindole (XIV) is formed. To a solution of 10 g. XI in 20 cc CHCl_3 at 20° is added a sol. of 9.2 g. XII in 20 cc CHCl_3 , heated 1 hour at 100° , and 1-ethyl-2-methyl-3-carbethoxy-5-hydroxy-6,7-dichloroindole (XV) is obtained, yield 54.5%, m.p. $209.5-210^\circ$ (from dioxane). 4.5 g. XV is mixed with 2N solution NaOH (in a current of N_2), dioxane is added until the precipitate is dissolved, 2.72 cc of VI is added, after 10 min. it is heated 30 min. at 100° , and 1-ethyl-2-methyl-3-carbethoxy-5-methoxy-6,7-dichloroindole is obtained, yield 4.7 g. m.p. $127-128^\circ$ (from dioxane). To a solution of 10.8 g. I and 30 cc dry acetone is added 26.3 g. XIII, heated 1 hour at 100° , evaporated, ether is added, and XIV is obtained, yield 38.2%, m.p. $232-233^\circ$ (from alcohol).

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TERENT'YEV, A.P.; KOST, A.N.; SALT'KOVA, Yu.V.; YERSHOV, V.V.

Synthesis with help of acrylic acid nitril. Part 29: Cyanoethylation
of some ketones. Zhur. ob. khim. 26 no.10:2925-2928 0 '56.

(MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Ethylation) (Ketones)

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TERENT'YEV A.P.
GRINEV, A.N.; TERENT'YEV, A.B.; TERENT'YEV, A.P.

Quinones. Part 13: The yield of endoethylennaphtofuran. Zhur. ob.
khim. 26 no.10:2931-2932 O '56. (MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Furan) (Quinones)

TERENT'YEV, A. P.

GRINEV, A.N.; VENEVTSEVA, N.K.; TERENT'YEV, A.P.

Quinones. Part 14: The reaction of π -benzoquinone with π -nitro- and π -bromobenzoylacetic esters. Zhur. ob. khim. 26 no.10:2933-2934 0 '56. (MIRA 11:3)

1. Moskovskiy Gosudarstvennyy universitet.
(Benzoquinone) (Acetic acid)

USSR/Organic Chemistry. Synthetic Organic Chemistry. E-2

Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26796.

Author : Terent'yev, A.P.; Potapov, V.M.,
Semion, I.Z.

Inst :

Title : Synthesis of Homologues of Taurine by Leukart's
Reaction.

Orig Pub: Zh. obshch. khimii, 1956, 26, No. 10, 2934 -
2937.

Abstract: The acids $\text{ArCH}(\text{NH}_2)\text{CH}_2\text{SO}_3\text{H}$ (II) - aromatic
homologues of taurine - were prepared using
Leukart's reaction by heating NH_4 of Ba salts
of $\text{ArCOCH}_2\text{SO}_3\text{H}$ (I) with HCOONH_4 or HCONH_2 ,
or a mixture of urea and HCOOH (2 to 6 hours,
165 - 200°). 0.4 mol of acetophenone is sul-
fonated with dioxanesulfotrioxide (III),

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Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26796.

neutralized with aqueous NH_3 , thickened by evaporation until it is dry, mixed with 1 mol of HCONH_2 , heated at 165° 6 hours, and the NH_4 salt of N-formyl- β -phenyltaurine (dissociation point 231° , yield 62.4%) is precipitated by the addition of 60 ml of alcohol. N-phenyltaurine, dissociation point 314° (purifying by repeated precipitation from aqueous NH_3), separates off from the solution of 0.03 mol of the NH_4 salt of N-formyl- β -phenyltaurine in 25 ml of boiling water at the addition of 7 ml of concentrated H_2SO_4 . Similarly, 29% of II ($\text{Ar} = \text{C}_6\text{H}_4\text{CH}_3\text{-n}$), dissociation point 347° , was obtained of 0.125 mol of n-methylacetophenone after sulfonation and heating with HCOONH_4 up to 220° for 2 hours. At the action of III

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200.0 g. then stirred 1 hr. with 200 ml. 5% NaOH. The ext. soln. was
in 100% AcOH, and extd. with H₂O, the ext. soln. was
then extd. with 100 ml. 5% HCOOH and

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TERENT'YEV, A.P.; SYAVTSILLO, S.V.; SAVUSHKINA, V.I.; ZHERNOVSKAYA, Ye.M.;
CHARKAYA, B.A.

Synthesis of 2-ethylanthraquinone, labelled by C^{14} carbon in the
nucleus. Dokl.AN SSSR 107 no.3:417-419 Mr '56. (MLRA 9:7)

1.Chlen-korrespondent AN SSSR (for Terent'yev).
(Anthraquinone) (Carbon--Isotopes)

TERENTYEV, A. P., and KLABUNOVSKIY, D. I.

"Die Rolle Der Dyssymmetrie der Moleculen bei der Entstehung des lebenden Stoffes," a paper presented at the International Symposium on the Origin of Life, Moscow, 19-24 Aug 1957.

TERENT'YEV, A.P.; YANOVSKAYA, L.A.; RUKHADZE, Ye.G., redaktor;
RODIONOV, V.M., akademik, redaktor [deceased]; KAZANSKIY, B.A.,
akademik, redaktor; KNUNYANTS, I.L., akademik, redaktor;
SHEMYAKIN, M.M., redaktor; MEL' NIKOV, N.N., prof, redaktor;
LUR'YE, M.S., tekhnicheskii redaktor.

[Polarographic analysis in organic chemistry] Poliarograficheski
method v organicheskoi khimii. Moskva, Gos. nauchno - tekhn. izd-
vo khim. lit-ry, 1957. 388 p. (Reaktsii i metody issledovaniia
organicheskikh soedinenii, vol.5) (MIRA 10:10)

1.Chlen-korrespondent AN SSSR (for Shemyakin).
(Polarography) (Chemistry, Organic)

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AUTHORS:

Terentyev, A. P., and Potapov, V. M.

62-1-21/21

TITLE:

Session of the International Commission on the Nomenclature of Organic Compounds (Sessiya mezhdunarodnoy komissii po nomenklature organicheskikh sovedineniy)

PERIODICAL:

Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1957, No. 1, pp. 126-127 (U.S.S.R.)

ABSTRACT:

Briefs are presented from the Session of the International Commission on the Nomenclature of Organic Compounds, held in Vedbeke, suburb of Copenhagen, Denmark, during August 27 through September 1, 1956. The names of members of the Commission and their nationalities are listed. Some resolutions adopted at the Session are described, together with a notice that the next session will be held in July, 1957 in Paris, France.

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Session of the International Commission on the Nomenclature 62-1-21/21
of Organic Compounds

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

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130-11 YEV, P. F.
TERENT'YEV, A.P.; YANOVSKAYA, L.A.

Using halogen-containing compounds for substitution halogenation
of organic substances. Reakts.org.socd.6:7-342 '57. (MIRA 10:12)
(Halogenation) (Substitution (Chemistry)) (Organic compounds)

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TERENT'YEV, Aleksandr P., and POTAPOV, Viktor M., Mors. Chemistry Inst.
Moscow State Univ. in Lomonosov

"Actual Problems of Nomenclature in Organic Chemistry."

Chemische Technik, No. 11, 1957.

TERENT'YEV, A.P.
OTEMPERANSKAYA, S.I.; TERENT'YEV, A.P.; BUZLANOVA, M.M.

Quantitative determination of thioalcohols and thiophenols.
Vost.Mosk.un.Ser.mat., mekh., astron., fiz., khim. 12 no.3:
145-147 '57. (MIRA 11:3)

1.Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo
universiteta.

(Chemistry, Analytical--Quantitative)
(Alcohol) (Phenols)

POTAPOV, V.M.; TERENT'YEV, A.P.

Role played by rotation isomerism in optical activity. Vest. Mosk. un.
Ser. mat., mekh., astron., fiz. khim., 12 no.5:163-170 '57.
(MIRA 11:9)

1.Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta.
(Isomerism)

GRIN&V, A.N.; TERENT'YEV, A.P.

Quinones. Vest. Mosk. un. Ser. mat. mekh. astron., fiz., khim. 12
no. 6:147-172 '57. (MIRA 11:10)

1. Kafedra spetssinteza Moskovskogo gosudarstvennogo universiteta.
(Quinone)

TERENT'YEV, A.P.; POTAPOV, V.M. (Moskva)

. Cleavage of racemates. Usp.khim. 26 no.10:1152-1179 0 '57.
(MIRA 10:10)
(Tartaric acid)

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CIA-RDP86-00513R001755330002-5"

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AUTHORS: Terentyev, A. P., and Kost, A. N.

TITLE: Syntheses with the Aid of Acrylonitrile. Part 30. Certain 1-Substitutes of Pyrrolidine and Piperidine (Sintezy s pomoshch'yu nitrila akrilovoy kisloty. XXX. Nekotorye 1-zameshchennye pirrolidina i piperidina)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 1, pp.262-263 (U.S.S.R.)

ABSTRACT: Using secondary amines, acrylonitrile and 1,4- or 1,5-dibromides as a basis, the authors synthesized a number of 1-dialkylamino-propylpyrrolidines or piperidines. Cyanethylation of 2,4-dimethylpyrrole resulted in the formation of beta-(2,4-dimethylpyrrol-1)-propionitrile which when reduced over a skeletal Ni did not form the homologous diamine but propylamine and 2,4-dimethylpyrrolidine. 1-Substitutes of pyrrolidine or piperidine were obtained by reduction of beta-dialkylaminopropionitriles into homologous diamines.
There are 6 references, of which 4 are Slavic.

ASSOCIATION: The Moscow State University (Moskovskiy Gosudarstvennyy Universitet)

PRESENTED BY:

SUBMITTED: February 6, 1956

AVAILABLE:

Card 1/1

79-2-30/58

Halogenocarylation of Unsaturated Compounds with Aromatic Diazo-Compounds

the hydrogen chloride, e. g., reaction with quinoline, methyl- or dimethyl-amine, pyridine and triethylamine have not produced positive results. Complete tarring of the reaction mixture took place in every case.

1 table. There are 8 references of which 4 are Slavic

ASSOCIATION: Moscow State University

PRESENTED BY:

SUBMITTED: February 20, 1956

AVAILABLE: Library of Congress

Card 2/2

15620 7/16/58

AUTHORS: Dombrowskiy, A. V.; Terentyev, A. P; Yurkevich, A. M. 79-2-31/58

TITLE: Halogenoarylation of Unsaturated Compounds with Aromatic Diazo-Compounds. Part 4. Synthesis of beta-Arylalkyl Carboxylic Acids. (Galoidarilirovaniye nepredel'nykh soyedineniy aromaticheskimi diazsoyedineniyami. IV. Sintez beta-arilalkilkarbonovykh kislot).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 419-421 (U.S.S.R.)

ABSTRACT: This report describes the results obtained from the conversion of halogenophenylation and halogenonaphthylation products into corresponding beta-substituted propionic and isobutyric acids, analogues of which found application in the role of plant stimulants. Experiments showed that methylacrylate and methylmethacrylate react with diazonium salts in an aqueous-acetone solution in the presence of copper dichloride forming methyl esters of alpha-chloro-beta-arylpropionic and alpha-chloro-beta-arylisobutyric acid (methyl-alpha-chloro-beta-arylpropionate and methyl-alpha-chloro-beta-arylisobutyrate). Reduction of alpha-chloro-beta-phenylpropionitrile and methyl-alpha-chloro-beta-phenylisobutyrate with

Card 1/2

79-2-31/58

Halogenoarylation of Unsaturated Compounds with Aromatic Diazo-Compounds.

Zn in ice cold acetic acid produced good yields of beta-phenylpropionic, beta-phenylisobutyric, 2-(alpha-naphthyl)- and 2-(beta-naphthyl)-propionic acids.

1 table. There are 8 references, of which 2 are Slavic

ASSOCIATION: Moscow State University

PRESENTED BY:

SUBMITTED: February 27, 1956

AVAILABLE: Library of Congress

Card 2/2

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755330002-5"

GRINEV, A.N.; VENETSEVA, N.K.; ~~TERRENT'YEV, A.P.~~

Research in the field of quinones. Part 17: Reaction of 2,3-dichloroquinone with benzoyl acetic ester. Zhur. ob. khim. no. 4: 1090-1091 Ap '57. (MLRA 10:8)

1. Moskovskiy gosudarstvennyy universitet.
(Quinone)

"APPROVED FOR RELEASE: 07/16/2001

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CIA-RDP86-00513R001755330002-5

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755330002-5"

GRINEV, A.N.; PROKOF'YEVA, G.N.; GILBERT'YEV, A.P.

Research on quinones. Part 18: Synthesis of substituted naphthoquinones.
Zhur.ob.khim. 27 no.6:1682-1690 Ja '82. (MIRA 10:8)

1.Moskovskiy gosudarstvennyy universitet.
(Naphthofuran)

ONILBY, I. A.; V. I. V. Ya.; ~~_____~~

Research on quinoxalines. Part 19: synthesis of some N-alkyl substituted
indoles. Khim. Geterotsiklov. 27 no. 6:163-164, 1977. 2 p. 10:20

1. Kharkovskiy gos. universitet.
Indoles

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755330002-5

APPROVED FOR RELEASE: 07/16/2001

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CIA-RDP86-00513R001755330002-5

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755330002-5"

TERENT'YEV, A.P.; BUTSKUS, P.F.

Synthesis with aid of acrylonitril. Part 32: Some derivatives of
cyanoethylated α -amino acids. Zhur.ob.khim. 27 no.10:2884-2888
O '57. (MIRA 11:4)

1. Moskovskiy gosudarstvennyy universitet i Vil'nyusskiy gosudarstvennyy
universitet.

(Amino acids) (Ethylation)

TERENT'YEV, A. P.
AUTHORS:

Kupletskaya, N. B., Dombrovskiy, A. V.
Terent'yev, A. P.

79-11-28/56

TITLE:

Haloidarylation of Unsaturated Compounds With Aromatic
Diazocompounds (Galoidarilirovaniye nepredel'nykh
soyedineniy aromaticheskimi diazosoedineniyami).
VI. Absorption Spectra of Arylbutenes, Arylbutadienes and
Arylbutenines in the Ultraviolet and Visible Part
(VI. Spektry pogloshcheniya v ul'trafioletovoy i vidimoy
oblastyakh arilbutenov, arilbutadiyenov i arilbuteninov).

PERIODICAL:

Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11,
pp. 3041-3047 (USSR)

ABSTRACT:

The chlorarylation-method worked out for butadiene-1,3, its
homologues and analogues permits to obtain the chloraryl-
butenes simply and with yields of 50-70 %. This synthesis
is realized by the interaction of the dienes and the
diazotized aromatic amines in an aqueous acetone solution
in the presence of a catalyst (CuCl). Among the many
conversions of the chlorarylbutenes the splitting off of
hydrogen chloride which leads to the formation of α -aryl-
butadienes is most interesting. This splitting off was
worked out with the aid of caustic potash in dioxane.

Card 1/3

Haloidarylation of Unsaturated Compounds With Aromatic
Diazocompounds. VI. Absorption Spectra of Arylbutenes,
Arylbutadienes and Arylbutenines in the Ultraviolet and
Visible Part

79-11-28/56

Various arylbutenines ($\text{X}^{\text{C}}\text{H}_4\text{CH}=\text{CH}-\text{C}\equiv\text{CH}$) were also
obtained in the same manner. Thanks to the obtained material
of structurally similar compounds it was attempted to
determine the dependence of the absorption spectra of these
products on their structure, the results being in agreement
with those of other authors. Thus the absorption spectra of
the arylbutenes, arylbutadienes and arylbutenines were
taken. It became evident that the substituents in the
nucleus which are no strong chromophores exert no influence
upon the character of the spectrum, but that this depends
on the position of the π -electrons in the molecule. The
introduction of a strong chromophore changes the character
of the spectrum.
There are 6 figures, 5 tables, and 6 references, 2 of which
are Slavic.

Card 2/3

Haloidarylation of Unsaturated Compounds With Aromatic
Diazocompounds. VI. Absorption Spectra of Arylbutenes,
Arylbutadienes and Arylbutenines in the Ultraviolet and
Visible Part

79-11-28/56

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: September 27, 1956

AVAILABLE: Library of Congress

1. Arylbutenes - Spectra
2. Arylbutadienes - Spectra
3. Arylbutanines - Spectra

Card 3/3

TERENT'YEV, A. P.

AUTHORS:

Dombrovskiy, A. V., Yarkovich, A. L.,
Terent'yev, A. P.

79-11-25/56

TITLE:

Haloidarylation of Unsaturated Compounds with Aromatic
Diazocompounds (Galoidarilirovaniye neprosel'nykh soyedineniy
aromaticheskimi diazosoyedineniyami).
VII. Reactions with Acrolein and Crotonaldehyde
(VII. Reaktsii s akroleinom i krotonovym al'degidom).

PERIODICAL:

Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11,
pp. 3047-3050 (USSR)

ABSTRACT:

The only example of a reaction between unsaturated aldehydes
and aromatic diazo salts is found in the paper by Meerwein and
collaborators. In the systematic investigation of the
conversions of the unsaturated compounds with aromatic
diazocompounds the authors investigated the hitherto not
described reaction between chloro- and bromobenzene
($C_6H_5N_2X$) and acrolein, as well as crotonaldehyde. In an
aqueous acetone solution in the presence of copper chloride
these aldehydes join with the phenyl radical and the haloid
atom the annexing taking place on the double bond $>C=C<$.
The yields in the end products are largely dependent on the

Card 1/2

Haloidarylation of Unsaturated Compounds With Aromatic
Diazocompounds. VII. Reactions with Acrolein and
Crotonaldehyde

79-11-25/56

temperature used in the haloidphenylation and on the medium. The best yields are obtained when the aldehydes are subjected to the action of neutral solutions of diazosalts, with an addition of calcium hydroxide to the reaction mixture. Thus the haloidphenylation of acrolein and crotonaldehyde was described. Synthesized were the earlier unknown α -chloro- and α -bromo- β -phenylpropionaldehydes, α -chloro- β -phenylbutyric acid aldehyde, diethylacetal- α -chloro- β -phenylpropionaldehyde and α -chloro- β -phenylbutyric acid aldehyde. There are 8 references, 3 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: October 25, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Acroleins - Chemical reactions 2. Crotonaldehydes -
Chemical reactions 3. Copper chloride catalyst -
Applications

TERENT'YEV, A. F.

AUTHORS: Grandberg, I. I., Kost, A. N.,
Terent'yev, A. P.

79-12-32/43

TITLE: Reactions of the Hydrazine Derivatives (Reaktsii proizvodnykh
gidrazina).
XVII. A New Synthesis of the α -Methyltryptofol (XVII. Novyy
sintez α -metiltryptofola).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 12, pp. 3342-3345 (USSR)

ABSTRACT: Lipp published in 1889, that on the reaction of the phenyl-
hydrazine with acetopropylalcohol 1 - phenyl - 3 - methyl -
1,4,5,6 - tetrahydropyridazine is obtained very easily.
Attempting to repeat Lipp's reactions, the authors obtained
a product with the constants given by him, it proved, how-
ever, to represent not tetrahydropyridazine, but the non-
cyclic phenylhydrazone of the acetopropylalcohol. Subject
to the action of hydrochloric acid this phenylhydrazone
easily splits off phenylhydrazine. At a heating to 200°C
it does not give up any water and does not transform into
tetrahydropyridazine. In the presence of a catalytical amount
of zinc chloride there results the α -methyltryptofol. Its
structure is supported by its conversion into the substituted

Card 1/2

Reactions of the Hydrazine Derivatives.
XVII. A New Synthesis of the α -Methyltryptofol

79-12-32/43

tryptamine by way of the bromide, that is to say into the 2-methyl - 3 - di-methyl aminoethylindole. The reactions described here do not only prove the structure of the phenylhydrazone, they also appear to constitute a new way for the synthesis of the α -methyltryptofol, which up to now was obtained in a much more complicated way. The α -methyltryptofol easily commutes into the acetate, which was characterised as pikrate, if it is subjected to the action of acetic acid anhydride (see the course of the reaction represented by six formulae). Besides, it was succeeded to synthesize the pyradizine by a conversion of the phenylhydrazine with methyl - γ -chloro-propylketone. The pyradizine differing from phenylhydrazone easily furnished a pikrate. There are 2 references, 0 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet).

SUBMITTED: December 12, 1956

AVAILABLE: Library of Congress

Card 2/2 1. Hydrazine derivatives-Quantitative analysis
2. α -Methyltryptofol-Synthesis

76641/43

AUTHORS: Dombrovskiy, A. V., Yurkevich, A. H., 79-12-33/43
Tarent'yev, A. P.

TITLE: Halide Arylation of **Unsaturated** Compounds With
Aromatic Diazo-compounds (Galoizatsirovaniye nepredel'nykh
soyedineniy aromaticheskimi diazsoyedineniyami).
IX. Synthesis of the α - Halide - β - Arylpropionic - and
of the β - Arylisobutyric Acid (Sintez α - galoiz - β -
arilpropionovykh i β - arilizomaslyanykh kislot).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12, pp. 3346-3349
(USSR)

ABSTRACT: In the course of experiments for the purpose of conducting
a direct synthesis of the phenylalanine and of its derivatives
with an utilisation of the halide arylation reaction of the
acrylnitrile, the authors developed a synthesising method of
the α - halide - β - arylpropionic acids by means of a
hydrolysis of the α - halide - β - arylpropionic nitriles,
using a mixture of formic acid and hydrochloric acid. The
synthesis known up to now of α - halide - β - aryl-
propionic acids with the help of nitrous acid and hydro-
chloric acid is not applicable to the production of amino-
acids. The method proposed here for the hydrolysis of the

Card 1/3

Halide Arylation of not Saturated Compounds With Aromatic 79-12-33/43
 Diazo - compounds. IX. Synthesis of the α - Halide - β -
 Arylpropionic - and of the β - arylisobutyric Acid

α - halide - β - arylpropionic nitriles with the help of the aforesaid mixture of acids leads quickly to the formation of the corresponding α - halide acids with an almost quantitative rate of production. The heating of the nitrile chloride was conducted with the three to five fold amount of 85 % formic acid and of concentrated hydrochloric acid. By this means, the following acids were obtained: α - chloro - β - phenyl -, α - chloro - β - η - methoxy - phenyl -, α - chloro - β - η - chloro phenyl, α - chloro - β - (2,4 - di-chloro phenyl -, α - chloro - β - (η - bromo phenyl) -, α - chloro - β - (p nitrophenyl) - and α - bromo - β - phenylpropionic acid (see formulae). Subject to identical conditions α - chloro - β - phenyl - and α - chloro - β - (η - nitrophenyl) - isobutyric acid were synthesized from the corresponding methylester.

Card 2/3

Halide Arylation of Unsaturated Compounds with Aromatic Diazo - compounds. IX. Synthesis of the α - Halide - β - Arylpropionic - and of the β - Arylisobutyric Acid

There are 9 references, 4 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet).

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

1. α -Halide- β -arylpropionic acids - Synthesis
2. β -Arylisobutyric acids - Synthesis
3. Cyclic compounds - Halide arylation

Card 2/3

20-114 3-30/60

AUTHORS: Torent'yev, A. P., Corresponding Member of the AN USSR,
Preobrazhenskaya, M. N.

TITLE: Synthesis of 5-Methoxyindole Derivatives (Sintez proizvodnykh
5-metoksiindola)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp. 560-563 (USSR)

ABSTRACT: The derivatives of 5-oxyindole, which forms the basis of the
serotin structure, are of considerable interest since many of
them are strong metabolites of serotin. This latter compound,
for its part, possesses varied physiological properties. During
the course of this investigation the authors obtained a
number of 2-aryl-5-methoxyindoles by condensation of p-ani-
sidine with substituted o-halogen acetophenones. The greatest
difficulties of the insulation of the reaction products re-
sulting from this process have not been described, but there
are data concerning the production of 2-phenyl-5-methoxyindole
and 2-(p-methoxyphenyl)-5-methoxyindole. The structure of
2-phenyl-5-methoxyindole was demonstrated from the fact that
N-benzoyl-5-methoxyanthranil acid is obtained at its ozonation.

Card 1/3

20-114 3-30/60

Synthesis of 5-Methoxyindole Derivatives

2-(p-methoxyphenyl)-5-methoxyindole was also obtained from the p-methoxyphenyl hydrazone, which is extremely sensitive to light, of the p-methoxyacetophenone. For yields and properties of the compounds obtained see Table 1. The absorption spectra for the production of indoles are similar in the ultra-violet sphere (Table 2 and Figure 1). 3-(p-methoxyphenyl)-5-methoxyindole was obtained by means of cyclization of (p-methoxyphenyl)- α -monomethyl-(p-methoxyphenyl)-ketone through zinc chloride. The absorption spectra in the ultra-violet sphere of the initial anisidine ketone for 2-(p-methoxyphenyl)-5-methoxyindole and for 3-(p-methoxyphenyl)-methoxyindole differ widely from each other. Verkade and Janetzky obtained a 39 % yield of 2-phenylindole through the influence of zinc chloride upon phenacylaniline at 160°C. These authors supposed that the originally formed 3-phenylindole is re-grouped under the influence of chlorine zinc and high temperature into 2-phenylindole. The re-grouping of 3-phenylindole into 2-phenylindole was already obtained previously by Fischer and Schmitt. The authors succeeded in demonstrating that under milder conditions (in ethanol) a substituted 3-phenylindole actually originates at the cyclization of anisidine ketone. There follows the experimental part dealing

Card 2/3

20-114 -3-30/60

Synthesis of 5-Methoxyindole Derivatives

with methods of production of the substances discussed. There are 2 figures, 2 tables and 5 references,

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

SUBMITTED: January 28, 1957

Card 3/3

TERENT'YEV, A.P.

20-5-33/60

AUTHOR

TERENT'YEV, A.P., corresponding member of the Academy, VOLODINA M.A., PODLESOVA, N.L., and GOLUBEVA N.Ye.

TITLE

The Synthesis of Pyrroles, Pyrrolines and Pyrrolidines from γ -ketoalcohols.
(Sintez pirrolov, pirrolinov i pirrolidinov iz γ -ketoalkogoley.- Russian)

PERIODICAL

Doklady Akademii Nauk SSSR 1957, Vol 114 Nr 5, pp 1036-1039 (U.S.S.R.)

ABSTRACT

In a previous paper the authors showed that the hydroamination reaction of γ -ketoalcohols by formamide or by its N-substituents leads to the formation of a nitro-geneous heterocycle. Pyrrolidine bases were obtained as reaction products. With regard to the formation of a 5-membered nitro-geneous heterocycle from γ -ketoalcohols (I, II) one can also imagine that water is separated from the alcohol- and ammonia- (or amine-) molecule over a dehydrating catalyst. The product of such a conversion must be a corresponding Δ^2 -pyrroline (IV). It may well be possible that one of the reaction products represents a homologue of 4,5-dihydro furan (III). The authors made it their object to study the relationship between the

CARD 1/4

20-5-33/60

The Synthesis of Pyrroles, Pyrrolines and Pyrrolidines from γ -ketoalcohols.

γ -ketoalcohols and the dehydrating catalysts, in order to find a way of synthesis of the comparatively little investigated and not easily accessible Δ^2 -pyrrolines, as well as of their dehydrogenation products of pyrroles. They have hitherto not been described. As objects of the investigation served γ -acetopropyl-(I) and secondary γ -acetobutyl-(II) alcohol. It was revealed that the transformation of the former in an ammonium stream at 450°C on aluminumoxide and Pd on asbestos (in an analogous way Ni/Al₂O₃) resulted in the formation of α -methyl pyrrolidine (V), α -methylpyrrole (VI) with a 10-20% yield and a small amount of α -Methyl- Δ^2 -pyrrolidine (IV). It seems that the last one is the primary reaction product; under contact conditions it undergoes disproportionation according to the type of irreversible catalysis by Zelinskiy yielding V and VI. The formation of α -methylpyrrole can be brought about by dehydrogenation of the mentioned substance under the influence of Pd, as well as under that of aluminumoxide itself. An examination of the reaction over aluminumoxide without Ni and Pd revealed that α -methyl Δ^2 -pyrrolidine represents the chief product (45 %);

CARD 2/4

20-5-33/60

The Synthesis of Pyrroles, Pyrrolines and Pyrrolidines from γ -ketoalcohols.

α -methylpyrrole develops under these conditions in very small amounts. Thus aluminum oxide exerts practically no influence upon the dehydrogenation of IV in this case. The most favourable conditions for the formation of α -methyl- Δ^2 pyrroling from γ -acetopropylalcohol are thus given at 310-320°C, using the γ -oxide of aluminum as a catalyst. After satisfactory conditions for the synthesis of the above mentioned pyrrolene had been found, the authors decided to use the γ -ketoalcohols (I,II) in a synthesis of the interesting and little investigated compounds of Δ^2 -pyrrolene bases. Some homologues of these substances are known as photosensibilizers. The authors succeeded in demonstrating that a formation of Δ^2 -pyrrolene bases with a yield of 25-55 % takes place, when ketoalcohols (I and II) are passed through in an ammonia or amine stream; or in a mixture with an aromatic amine, over aluminumoxide at 310-320° C. At lower temperatures (280-290 C) they contain a considerable admixture of corresponding 4,5-

CARD 3/4

20-5-33/60

The Synthesis of Pyrroles, Pyrrolines and Pyrrolidines from γ -ketoalcohols.

dihydro furans (III). The study of the reaction mechanism is no direct object of this paper and has to be further investigated. A detailed elaboration of reaction conditions (other dehydrating catalysts, activation of aluminum-oxide) will make it possible to increase the yield of pyrroline bases to some extent. The thus obtained Δ^2 -pyrrolines readily form haloidalkylates. The position of double bonds cannot yet be considered as firmly established, but these compounds most probably represent Δ^2 -pyrrolines.
(2 Tables, 7 Slavic references)

ASSOCIATION:

"M.V. LOMONOSOV" Moscow State University.
(Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova)

PRESENTED BY:

-

SUBMITTED:

12.2.57

AVAILABLE:

Library of Congress.

CARD 4/4

TERENT'YEV A.P.

BUTLEROV, Aleksandr Mikhaylovich; TERENT'YEV, A.P., otvetstvennyy red.;
DANILOV, S.N., red.; PLATE, A.F., red.; POROSHIN, K.T., red.;
BYKOV, G.V., red.izd-va; PAVLOVSKIY, A.S., tekhn.red.; MAKUN, Ye.V.,
tekhn.red.

[Works] Sochinenia. Moskva, Izd-vo Akad. nauk SSSR. Vol.3.
[Popular scientific, historical, critical, bibliographical and
other works in chemistry. Travels] Nauchno-populiarnye, istoriche-
skie, kritiko-bibliograficheskie i drugie raboty po khimii.
Puteshestviia. 1958. 429 p. (MIRA 11:4)

1. Chlen-korrespondent AN SSSR (for Terent'yev, DaniloV)
(Chemistry)

Organic Chemistry Course

919

catalysis, the application of tagged atoms, etc. The author thanks docent Ye. G. Rukhadze for her help in working on the present edition, and for writing the paragraphs on high-polymer compounds and plastic masses.

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Foreword

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Card 2/24

AUTHORS: Terent'yev, A. P., Obtemperanskaya, S. I., SOV/156-58-1-20/40
Yermolenko, N. V.

TITLE: The Determination of Chlorine and Bromine in Organic Compounds
by Means of Magnesium Nitride (Opredeleniye khloro i bromo v
organicheskikh soyedineniyakh pri pomoshchi nitrida magniya)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 1, pp. 83-85 (USSR)

ABSTRACT: Many methods of determination of halide in organic compounds
are known. A critical survey of the usual methods (Refs 1 -5)
is given. These methods have certain shortcomings. The method
suggested by the authors may be carried out easily, it is
quick and not dangerous. It is based upon a reductive
decomposition of a chlorine- and bromine-containing substance
by magnesium nitride at 650 - 800°. Then the haloid ion in the
formed magnesium hydrogen salt is determined by means of the
argentometric titration according to Fol'gard. No quantitative
reproducible results were obtained in the iodine determination.
The reaction mass does not smelt with the glass and may be
removed easily from test tube. No explosions take place if the
reaction product is acidified. The method of production of

Card 1/2

The Determination of Chlorine and Bromine in
Organic Compounds by Means of Magnesium Nitride

SOV/156-58-1-20/46

magnesium nitride is described. The quantitative chlorine- and bromine determination in organic compounds is divided in a semi-micromethod and a micromethod. The determination results are given in table 1 (semi-micromethod, 18 organic compounds) and in table 2 (micromethod, 8 compounds). The errors occurring do not surpass + 0.3%, compared to the content, determined theoretically. There are 2 tables and 5 references, 4 of which are Soviet.

ASSOCIATION: Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Organic Chemistry of the Moscow State University imeni M.V. Lomonosov)

SUBMITTED: October 15, 1957

Card 2/2

5(3), 17(12)
AUTHORS:

~~Terent'yev, A. P., Kost, A. N., Zolotarev, SOV/153-58-4-9/22~~
~~Ye.Kh, Vinogradova, Ye. V., Kalakutskaya, T. V., Yurgenson,~~
I. A.

TITLE:

I. The Esters of Tetrahydro-Phthalic Acid and its Homologs
as Insect Repellents (I. Efiry tetragidrofthalovoy kisloty
i yeye gomologov kak insektorepellenty)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 4, pp 55 - 60 (USSR)

ABSTRACT:

Although the insect repellents have been more and more applied so far and thousands of individual preparations have been tested, neither the relation between their structure and efficiency nor their mechanism of efficiency have been definitely clarified. For these reasons the search for new means was often unsuccessful, whereas hardly a few of the thousands of tested substances were practically used. Dimethyl phthalate is the most carefully investigated and practically most applied repellent. Yet it is not efficient in any case, and large-scale use of it is limited by raw material

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Homologs as Insect Repellents

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scarcity. The authors synthesized other prospective repellents: "Ind-lon", "Rudzners-612" (in the USSR RP -52) and "Dimelon" (RP -50), which had the same effect as or a weaker effect than dimethyl phthalate on various mosquito species. RP -50 was a little more active than others. Therefore the authors investigated, according to the structural analogy, a series of esters of the tetrahydro phthalic acid (RP -1, RP -2, RP -5, RP -17, RP -20, RP -23, RP -33 and RP -51). Dimethyl, diethyl and dibutyl phthalate were used for comparison. The compounds investigated are related in structure to dimethyl phthalate, but differ by their lack of aromatic bonds in the 6-membered ring. Diene hydrocarbons and maleic anhydride, which are easily obtained by benzene or furfural-oxidation, were the raw materials used for that purpose. In summer of 1954, Ye.Kh.Zolotarev and N.A. Tamarina investigated at the Belomorskaya biologicheskaya stantsiya MGU (White Sea Biological Station of the university mentioned in the title) the effect of individual preparations on mosquitoes *Aedes communis* and *A. dorsalis* and cerato-

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pogonides of the species Culicoides. At the Ryazanskiy meditsinskiy institut imeni I.P.Pavlova (Ryazan' Medical Institute imeni I.P.Pavlov) it was found that a narcotic effect (fusel-oil drunkenness) is exercised by the dibutyl esters upon rats and rabbits. Large-scale tests in 1956 showed that the preparations RP-1 and RP-50 protect efficiently against the mosquitoes: Aedes vexans, A. maculatus, A. cinereus, A. Cyprius, A. cataphylla, A. punctator, A. communis, A. cinereus, A. dorsalis, and Anopheles bifurcatus. A table shows the comparative efficiency of individual repellents. It results from this that the repellents RP-1, RP-17 and RP-51, which were investigated for the first time, are equal to dimethyl phthalate with respect to their efficiency. The efficiency degree of various mixtures of these compounds was not higher. Further investigations would be necessary only of RP-44 (dimethyl phthalate with diethyl adipate), RP-46 (the same with dibutyl sebacate) and RP-47 (the same with arisole), since they are a little longer efficient against mosquitoes. All preparations

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were investigated as to their acidity, which causes skin irritation, as is known. It was found that the introduction of a methyl or methylene group into the structure of the dimethyltetrahydro phthalate does not exert considerable influence upon the activity of the preparation. Mixtures were supplied by P.A.Mosakin, Corresponding Member, Academy of Sciences, USSR, and V.I.Lyubomilov, Candidate of Chemical Sciences. There are 1 table and 13 references, 5 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova
(Moscow State University imeni M.V.Lomonosov) Kafedra
organicheskoy khimii i kafedra entomologii (Chair of
Organic Chemistry and Chair of Entomology)

SUBMITTED: November 2, 1957
Card 4/4

5 (3,4)
AUTHORS:

Kazitsyna, L. A., Lokshin, B. V.,
Polstyanko, L. L., Terent'yev, A. P.

SOV/55-58-6-26/31

TITLE:

Infrared Spectra of Several Inner-complex Compounds in the
Field of the Valency Oscillations of N-H (Infrafrasnyye
spektry nekotorykh vnutrikompleksnykh soyedineniy v oblasti
valentnykh kolebaniy N-H)

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki,
astronomii, fiziki, khimii, 1958, Nr 6, pp 207 - 213 (USSR)

ABSTRACT:

The object of this article is the investigation of the struc-
ture of the inner-complex compounds of the quadri-coordinated
metals (Cu, Ni, Pd, Be, Zn, Cd) in which a successive modifi-
cation of the electronic shell takes place. These metals are
capable of forming tetraedric or even (in this case cis- and
transisomers) complexes. The examination was carried out by
means of infrared-absorption spectra. These spectra permit a
determination concerning the existence of the transisomers,
as with the latter the symmetrical oscillations are not ac-
tive in the infrared spectrum owing to the absence of a change
of the bipolar moment. In order to draw conclusions as to the
even cis-shape or the tetraedric shape, further tests are re-

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in the Field of the Valency Oscillations of N-H

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quired. In the present paper the authors restricted their investigations to the possibility of determining the even trans-configuration. Infrared spectra were taken of a number of compounds containing the atomic group of HN-Me-NH . The authors tried to find out the configuration, taking into account the absorption bands in the field of the valency oscillations of the N-H bond. The following compounds were investigated: Cu, Ni, Pd, Cd, Be, iminates of salicyl aldehyde, the acetyl-acetone iminates of Cu, Ni, Pd, the o-oxyacetophenone iminates of Cu and Ni, the β -oxynaphtaldehyde-iminates of Cu and Ni and the copper salts of the ethylene-bis- α -iminopropione- and of the α -phenyl acetic acid. The experimental part contains a short description of the syntheses of the various complex compounds; the outward form and the contents of nitrogen and copper are shown in table 1. In figure 1 the spectra of those compounds are shown whose X-ray structural analysis and magnetic measurements seemed to point to a trans-structure. Figure 2 refers to the spectra of the Cd and Be salicylal iminates which are of tetraedric structure, and to the spectra of the last-mentioned compounds, which - owing to the presence of an

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ethylene-bridge - show an even cis-configuration. Table 2 is a compilation of all results, characterizing the absorption of the compounds investigated in the field of the N-H-binding valency oscillations. The data obtained permit the following conclusions to be drawn: the composite bands of the cis- and trans-configuration are generated under the influence of the crystal lattice. If in the field of the valency oscillations but one band becomes clearly visible, this is considered as a proof that there is an even trans-configuration. If in solutions this one band remains unchanged in spite of another scission, then the existence of this band is only a proof for an even trans-configuration, if the solvent does not exercise any influence on the interaction between the metal-atom and the donor atoms. There are 2 figures, 2 tables, and 8 references, 2 of which are Soviet.

ASSOCIATION: Kafedra organicheskoy khimii (Chair for Organic Chemistry)

SUBMITTED: July 25, 1958
Card 3/3

AUTHORS: Terent'yev, A. P., Pedoseyev, P. N. 75-13-3-17/27
Ivasheva, N. P.

TITLE: New Methods of the Quantitative Determination of Nitrogen, Sulfur and Halogens From a Single Weighed Portion of Organic Substance (Novyye metody kolichestvennogo opredeleniya azota, sery i galogenov iz odnoy naveski organicheskogo veshchestva).
Communication 4. The Use of Calcium for the Decomposition of the Substance (Soobshcheniye 4. Primeneniye kal'tsiya dlya razlozheniya veshchestva)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 3, pp 344-348 (USSR)

ABSTRACT: In earlier papers the authors showed that nitrogen, sulfur and halogens in organic substances can be quantitatively determined by means of powdered metallic magnesium (Reference 1). This method has several disadvantages. The reaction mass has to be prepared with acid, which may lead to the formation of explosive mixtures of silicon hydrides, hydrogen and air. Therefore the decomposition is performed

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New Methods of the Quantitative Determination of
Nitrogen, Sulfur and Halogens From a Single Weighed
Portion of Organic Substance.
Communication 4. The Use of Calcium for the Decomposition
of the Substance

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in the atmosphere of an inert gas. In order to remove the shortcomings of this method and to simplify the determination, the authors used powdery calcium instead of magnesium. It reacts with water already at the usual temperature and combines with oxygen, nitrogen, sulfur and halogens. In contrast to magnesium, calcium does not react with glass at temperatures of 700-750°C, besides the melting and boiling points are higher than those of magnesium. The principle of the new method consists in the fact that a weighed portion of the organic substance to be analyzed which contains nitrogen, sulfur and halogens is treated with powdery calcium at 700-750°C in an atmosphere of ether vapor or hydrogen. On this occasion calcium-nitride, -sulfide and -halogenide form in which nitrogen, sulfur and halogens are quantitatively determined. In the present paper two apparatus suitable for the performance of this determination are drawn and described in detail. The air must before

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New Methods of the Quantitative Determination of
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the determination be removed from all parts of the apparatus by means of ether vapor. The performance of the decomposition of the organic substance by means of calcium is described in detail. After the decomposition product nitrogen is removed, as ammonia with water or 30% ethanol, and acidimetrically determined. After acidification of the reaction product after the decomposition with calcium sulfur is expelled as hydrogen sulfide and iodimetrically titrated. The halogens finally are determined by preparing the reaction mixture with diluted nitric acid and subsequent argentometric titration. The performance of these determinations is exactly described, too. Thus one, two or all three of the above-mentioned elements can be quantitatively determined from one weighed portion (the respective varieties of the method are described in detail). By using calcium instead of magnesium for the decomposition

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of the organic substance the analysis is simplified and
the duration of its performance shortened. A number of
organic substances were analyzed by this new method; the
results of 26 of these analyses are given in the paper.
There are 2 figures, 1 table and 4 references, 2 of which
are Soviet.

ASSOCIATION: Nikolayevskiy korablestroitel'nyy institut i Moskovskiy
gosudarstvennyy universitet im. M. V. Lomonosova
(Nikolayev Ship-Building Institute and Moscow State
University imeni M. V. Lomonosov)

SUBMITTED: December 20, 1956

1. Calcium--Applications 2. Organic materials--Chemical analysis

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KAZITSYNA, L.A.; LOKSHIN, B.V.; POLSTYANKO, L.L.; TERENT'YEV, A.P.

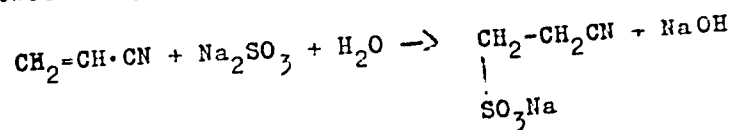
Infrared spectra of some internally complex compounds in the
N-H valence range. Vest.Mosk.un.Ser.mat.,mekh.,astron.,fiz.,
khim. 13 no.6:207-213 '58. (MIRA 12:4)

1. Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo
universiteta.

(Complex compounds---Spectra)

TERENT'YEV N P
 AUTHORS: Terent'yev, A. P., Obtemperanskaya, S. I., 32-2-12/60
Buzlanova, M. M.
 TITLE: Potentiometric Method for the Determination of Acrylnitrile
 With Sodiumsulfite (Potentsiometricheskiy metod
 opredeleniya akrilonitrila s pomoshch'yu sul'fita natriya)
 PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 157-157
 (USSR)

ABSTRACT: Although acrylnitrile is produced industrially there is no
 satisfactory method for its determination. For this reason
 the present method was developed. It is based on the reaction
 between acrylnitrile and sodiumsulfite:



Card 1/2 To the dried and distilled sample of the substance dioxane
 and a certain amount of 0,5 n sodiumsulfite solution is

Potentiometric Method for the Determination of Acryl-
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added. After having stirred with an agitator the solution to be investigated is titrated potentiometrically with 0,1 n hydrochloric acid in a bulb. According to a table mentioned the accuracy of the method is between 99,77 and 100,25 %. There is 1 figure.

ASSOCIATION: Moscow State University, imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

AVAILABLE: Library of Congress

1. Acrylnitrile-Determination
2. Sodium sulfite-Applications
3. Titration

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